

# DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 314

(6 December 2004)



## General Situation during November 2004 Forecast until mid-January 2005

The Desert Locust situation remained serious during November. A substantial number of immature swarms from the Sahel continued to arrive in Northwest Africa where intensive aerial and ground control operations were already in progress. A few swarms reached the Canary Islands and southern Portugal. Several swarms moved west in the Sahel and reinvaded northern Burkina Faso, Mali, Mauritania and northeastern Senegal. Some of these swarms were associated with the Southern Circuit migration and could eventually reach southeastern Senegal and Guinea. Other swarms moved east across northern Egypt and reached Israel, Jordan and Saudi Arabia while some adults were seen in Lebanon and Syria. Conditions improved in northwest Mauritania where breeding could occur during the forecast period.

**Western Region.** Although the situation improved in the Sahel as numerous swarms continued to move north and arrive in Morocco, Algeria, Tunisia, and Libya, immature swarms persisted in southwest Mauritania. At mid-month, swarms from late summer breeding in the Sahel reinvaded northern Burkina Faso and moved into southwest Mali, a relatively rare Southern Circuit migration. Other swarms reinvaded western Mali, southern Mauritania and northeastern Senegal, and there was an unconfirmed report from Gambia. These infestations were probably a

mixture of early second-generation swarms and late developing swarms from summer breeding in the Sahel. Unusually strong and warm winds at the end of November allowed a few swarms to reach the Canary Islands and southern Portugal where they subsequently dispersed and were blown back to sea. Smaller infestations were present and are likely to persist in northern Mali and Niger and in Cape Verde. Egg laying, hatching and band formation are expected to occur during the forecast period in northwest Mauritania where habitats have now become favourable. Aerial and control operations treated 2.2 million ha in the region during November.

**Central Region.** Some immature swarms that arrived on the northwest coast in Egypt at the end of October moved east during November along the Mediterranean coast while others appeared in the Western Desert along the Libyan border. Those in the north eventually reached the Nile Delta and Cairo before dispersing over a large area of the Sinai Peninsula, the eastern Mediterranean and the northern Red Sea. Several groups and swarms invaded southern Israel, Palestine, western Jordan, Cyprus, and the northern Red Sea coast in Saudi Arabia. Smaller infestations appeared on the coast in Lebanon and Syria and on the Red Sea coast in Egypt. Control operations were conducted in most of the affected countries. There is a risk that infestations will appear in traditional winter breeding areas along the Red Sea coast where, given sufficient rainfall, breeding could occur and hopper bands could form in January.

**Eastern Region.** No locusts were reported during November in the Region, and no significant developments are likely.

The FAO Desert Bulletin is issued monthly, supplemented by Updates during periods of increased Desert Locust activity, and is distributed by fax, e-mail, FAO pouch and airmail by the Locusts and Other Migratory Pests Group, AGP Division, FAO, 00100 Rome, Italy. It is also available on the Internet.

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### Weather & Ecological Conditions in November 2004

**Good rains fell in northwest Mauritania during November, causing habitats to become favourable for breeding. Good rains also fell along the Atlas Mountains in Northwest Africa but decreasing temperatures will limit locust maturation and breeding. Rain fell in the winter breeding areas along both sides of the Red Sea. Vegetation continued to dry out in the Sahel.**

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) continued to retreat south of 15N during November. From mid-month onwards, it was well south of the locust breeding areas in the Sahel in West Africa. Good rains fell on 7-10 November in Cape Verde and extended to northwest Mauritania (Inchiri and southwest Adrar) and southern and central areas of Western Sahara on the 8-9th. The rains were sufficient in Mauritania and Western Sahara to allow habitats to become favourable for breeding in the second half of the month. Although no rainfall occurred in the Sahel and vegetation is nearly dry or rapidly drying out in all areas, good conditions persisted in the wadis of the Adrar des Iforas in northern Mali and in the eastern part of the Air Mountains in Niger. In Northwest Africa, dry conditions persisted in the Sahara south of the Atlas Mountains. Light to moderate rains fell along the southern foothills of the Atlas Mountains and in the valleys of the Middle and High Atlas in Morocco and Algeria, including the Souss Valley, where conditions were better. Libya was dry, except in the centre where good rains fell, making habitats favourable for local breeding. Throughout the month, numerous depressions formed over the eastern Atlantic and moved east through the Mediterranean. Strong, warm southerly winds occurred for a day or two with each depression that allowed locusts to move further north and east in Northwest Africa as well as off shore to the Canary Islands and southwest Europe.

In the **Central Region**, light rain fell in a few places on the Red Sea coast in Sudan south of Port Sudan, in Saudi Arabia near Mecca and Jizan, and in Yemen. In the latter area, conditions continued to be favourable for breeding. In northern Somalia,

moderate to heavy rains fell in the interior between Erigavo and Las Anod, moderate rains fell on the northwest coast, and isolated showers fell near Hargeisa. Warm southerly winds associated with depressions over the eastern Mediterranean and lasting a day or two occurred several times during the month. These allowed locusts to move in a northeasterly direction from northern Egypt. During the remainder of the month, prevailing winds over the northern part of the Central Region were generally cold and from the north except in the Red Sea Trench where they were warmer. As a result, adults could move south along the shores of the Red Sea.

In the **Eastern Region**, no significant rainfall occurred and dry conditions prevailed during November.



### Area Treated

More than 2.2 million ha were treated in November, bringing the total area treated since the beginning of the upsurge (October 2003) to 11 million ha.

	Current month	Campaign cumulative
Algeria	685,371 ha (1-30 Nov)	819,916 ha
Cape Verde	1,874 ha (1-30 Nov)	2,863 ha
Cyprus	NR (2 Nov)	
Egypt (est.)	50,000 ha (28 Oct – 25 Nov)	
Israel	NR (19-30 Nov)	
Jordan	4,520 ha (20-24 Nov)	
Lebanon	10 ha (3 Nov)	
Libya	42,674 ha (1-27 Nov)	48,659 ha
Mali	5,050 ha (1-30 Nov)	296,177 ha
Mauritania	312,368 ha (1-30 Nov)	1,012,553 ha
Morocco	1,075,260 ha (1-30 Nov)	1,534,798 ha
Niger	10,700 ha (1-30 Nov)	200,080 ha
Saudi Arabia	1,100 ha (21-30 Nov)	
Senegal	60,542 ha (1-30 Nov)	702,892 ha
Tunisia	11,606 ha (2-20 Nov)	25,791 ha

*Note: Reporting delays and discrepancies may affect the accuracy of these figures; NR = not reported.*



### Desert Locust Situation and Forecast

*( see also the summary on page 1 )*

#### WESTERN REGION

##### **Mauritania**

##### • SITUATION

During November, numerous immature swarms of variable sizes and densities were present in the south

and southwest where control operations continued. Most of the swarms were seen moving to the north. As the month progressed, some of the adults were maturing. In the southeast, immature groups were scattered in several areas. From mid-month onwards, immature swarms, including several large swarms, reinfested the southeast (Hodh Charghi, Hodh Gharbi) and the extreme south in Guidimaka near the border with Mali and Senegal. These swarms were probably a mixture of early second-generation swarms and late developing swarms from breeding areas further east in the Sahel. During the last decade of the month, immature swarms increased near Nouakchott and a few swarms had matured near Atar (2032N/1308W). Scattered immature gregarious adults and groups appeared further north between Zouerate (2244N/1221W) and Bir Moghreïn (2510N/1135W). Aerial and control operations treated 312,368 ha during November.

• FORECAST

*The situation in the south will improve as the remainder of the swarms move to the northwest and north. Most of the swarms are expected to concentrate in areas of recent rainfall in Inchiri and Adrar where they will mature and lay eggs. Hatching and band formation will occur from egg laying by mature swarms that are already present in the northwest. As other swarms mature, further breeding will occur that could lead to the formation of a substantial number of bands. During periods of warm southerly winds, swarms are likely to move to the north where maturation and breeding will occur if rains fall.*

**Senegal**

• SITUATION

The situation improved during the first week of November in the centre and north where only small immature groups were present between Thies (1449N/1652W) and Diourbel (1439N/1612W). Several immature swarms persisted along the Senegal River Valley near Podor (1640N/1457W) and Saint Louis (1601N/1629W). During the last decade of the month, several large immature swarms appeared from the east in the northeast of the country near Bakel (1454N/1226W) close to the borders of Mauritania and Mali. These swarms were probably late developing swarms from breeding areas further east in the Sahel. Some of the locusts apparently moved further south in the Tambacounda region. Aerial and control operations treated 60,542 ha during November.

• FORECAST

*The situation in the north will improve as any remaining swarms move further north. Some of the swarms in the northeast may move south to the Casamance and Tambacounda regions in the south*

*and southeast where they could be supplemented by a few "southern circuit" swarms arriving from western Mali. These areas should remain alert.*

**Mali**

• SITUATION

The situation continued to improve in the Sahelian zones of Kayes, Koulikoro, Segou, Mopti, Tombouctou and Gao during November where few locusts were reported. In the north, small groups and bands of fifth instar hoppers at densities up to 200 hoppers/m<sup>2</sup> and a few immature swarms at densities up to 400 adults/m<sup>2</sup> were present in the Timetrine and Adrar des Iforas. During the second decade, immature swarms reinvaded areas close to the borders of Mauritania in the west. Other swarms were seen in the centre and southwest between the border of Burkina Faso, Mopti (1430N/0415W) and Bamako. These swarms probably originated from late summer breeding and some were moving west and southwest along the "southern circuit". Swarms were also seen moving northwest of Araouane (1853N/0331W), some 200 km north of Tombouctou. Aerial and control operations treated 5,050 ha during November.

• FORECAST

*Moderate numbers of locusts, including a few groups and swarms are likely to persist, mature and eventually lay eggs in those areas that remain favourable in the Adrar des Iforas, Tilemsi Valley and Timetrine. Several swarms associated with the "southern circuit" are expected to move in the southwest towards Senegal and Guinea.*

**Burkina Faso**

• SITUATION

From 8 November onwards, several immature swarms reinvaded the northeastern provinces of Seno and Oudalan, coming from adjacent areas in western Niger and eastern Mali. Most of the swarms were moving in a westerly direction and reached the southwestern provinces of Kossi and Sourou near the Malian border.

• FORECAST

*There is a low risk that a few more swarms from adjacent areas in Niger and Mali could transit through northern areas. No further breeding or developments are expected.*



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### Niger

#### • SITUATION

The situation improved during the first week of November in the Sahelian zone where only small infestations of late instar bands and a few immature groups and swarms were present near Tahoua (1457N/0519E). At mid-month, numerous immature groups and several swarms arrived in northern and southeastern parts of the Air Mountains and in southern Tamesna. There were also unconfirmed reports of locusts in the west in the Tillaberi region and further north in the Air. In southeastern Air, transiens fifth instar hoppers were present in areas of previous breeding. Aerial and control operations treated 10,700 ha during November.

#### • FORECAST

*Moderate numbers of locusts, including a few groups and swarms are likely to persist and mature in those areas that remain favourable in the Air Mountains.*

### Chad

#### • SITUATION

No reports received

#### • FORECAST

*Low numbers of adults may be present in parts of the northeast.*

### Cape Verde Islands

#### • SITUATION

In early November, a few swarms were seen on Boa Vista, Brava, Fogo and Santiago islands. Throughout the month, hatching occurred on several islands (Santo Antao, Sao Nicolau, Fogo, Maio and Brava) and small patches of bands were forming at densities up to 200 hoppers/m<sup>2</sup>. Aerial and control operations treated 1,874 ha during November.

#### • FORECAST

*Additional hatching and the formation of small groups and bands may occur on some islands. If uncontrolled, a few small groups and swarms could form. The risk of swarms arriving from West Africa will decline as temperatures decrease.*

### Gambia

#### • SITUATION

On 30 November, there was an unconfirmed report of a 1 km<sup>2</sup> swarm in the centre at Njama Heluman.

#### • FORECAST

*There is a risk that a few groups or swarms may arrive from the north or east.*

### Guinea Bissau

#### • FORECAST

*There is a low risk that a few locusts could arrive from the north as the Inter-Tropical Convergence Zone moves southward.*

### Guinea

#### • FORECAST

*There is a low risk that a few groups or swarms could arrive from the north or east.*

### Benin, Cameroon, Cote d'Ivoire, Ghana, Liberia, Nigeria, Sierra Leone and Togo

#### • FORECAST

*No significant developments are likely.*

### Algeria

#### • SITUATION

During November, numerous immature swarms at densities up to 35 adults/m<sup>2</sup> continued to arrive from the Sahel in the south and west of the country and moved north to the Atlas Mountains. Locust infestations were reported in 20 regions, mainly in the north between Morocco and Tunisia. The most affected regions were Tindouf, Naama, Sidi Bel Abbes, Tamanrasset, Adrar and Tlemcen. Aerial and ground control operations treated 685,371 ha during November.

#### • FORECAST

*Additional immature swarms from West Africa are expected to arrive in the south and west and move towards the Atlas Mountains during periods of warm southerly winds. This movement is likely to decline by the end of December. The majority of the swarms will remain immature because of low temperatures. Nevertheless, some swarms could mature and lay eggs in areas where temperatures are warmer and rainfall has occurred.*

### Morocco

#### • SITUATION

During the first decade of November, numerous immature swarms arrived in the Bir Gandouz and Awssard regions in the south of Western Sahara and progressively moved north to the Souss Valley and the Anti-Atlas Mountains. Other swarms arrived in the east and northeast. Fragments of swarms were seen in the High Atlas north of Agadir (3030N/0940W) and Taroudant (3031N/0855W) and on the coast near Essaouira (3126N/0958W). Swarms were also reported in the northeastern regions of Missouri (3303N/0400W) and Jerada (3418N/0210W).

During the second and third decades, swarms continued to reach the above areas. More swarms appeared in the Western Sahara in the centre near Guelta Zemmour (2508N/1223W), in the north near Smara (2644N/1142W) and along the coast between Laayoune (2708N/1313W) and Tan-tan (2827N/1109W). More swarms also arrived in the Middle Atlas and in the northeast near Figuig (3207N/0113W) and Ain Beni Mathar (3400N/0201W), almost reaching Oujda (3441N/0145W). Warm southerly winds on the 28th carried adult groups to the Atlantic coast near Safi (3218N/0914W). The situation was generally calm south of the Atlas Mountains between Ouarzazate and Errachidia. Aerial and ground control operations treated more than 1 million ha during November.

• **FORECAST**

*Additional swarms from West Africa are expected to arrive in Western Sahara and move north to the Atlas Mountains during periods of warm southerly winds. This movement is likely to decline by the end of December. The majority of the swarms will remain immature because of low temperatures. Nevertheless, some swarms could mature and lay eggs in areas where temperatures are warmer and rainfall has occurred. Some swarms in Western Sahara are likely to remain in any areas where rain may have fallen, mature and lay eggs. If so, hatching could start by the end of the forecast period.*

**Libyan Arab Jamahiriya**

• **SITUATION**

On 1-4 November, a few immature swarms were present on the northeastern Mediterranean coast near Tubruk (3206N/2356E). During the first three weeks, numerous immature swarms at densities up to 100 adults/m<sup>2</sup> continued to arrive in the southwest from the Sahel in West Africa. A smaller number of swarms arrived in the northwest, mainly during the first week, reportedly coming from adjacent areas in southern Tunisia as well as from further south. The swarms spread east along the coast nearly reaching Sirte (3110N/1639E), and were present in the interior between Nalut (3152N/1058E), Ghadames (3010N/0930E) and Mizda (3125N/1302E). Immature swarms were reported in the centre of the country near Jebel Al Haruj Al Aswad in W. Sayad (2745N/1738E) where unprecedented breeding was in progress locally and transients first and second instar hoppers at densities of 5-10/m<sup>2</sup> were present. In the southeast, groups of immature gregarious adults were seen at Kufra Oasis (2411N/2315E) and near Jebel Uweinat at the border with Egypt and Sudan in W. Gazal at densities of 10-15/tree. Aerial and ground control operations treated 42,675 ha on 1-27 November.

• **Forecast**

*A few more swarms from the summer breeding areas in the Sahel may appear in the west from Ghat to Ghadames and the Hamada al Hamra early in the forecast period. Most of the adults are expected to remain immature for several months.*

**Tunisia**

• **SITUATION**

During November, numerous immature swarms arrived in the southern (Tataouine, Medenine, Kebili, Tozeur, Gafsa, Sidi Bouzid, Gabes) and central (Sfax, Kairouan, Kasserine, Siliana, Kef) provinces of the country. The heaviest affected area was Gafsa. Aerial and ground control operations treated 11,606 ha from 2-20 November.

• **FORECAST**

*More swarms may appear in the south and centre in December during periods of warm southerly winds. The adults are expected to remain immature for several months.*

**EUROPE**

**Spain**

• **SITUATION**

On 19 November, low numbers of gregarious immature adults reached Gran Canaria in the Canary Islands. On the 26-28th, groups of adults and at least one immature swarm reached Lanzarote and Fuertaventura. In both cases, the locusts arrived from Northwest Africa on unusually warm and strong southerly winds. Heavy rain and strong winds from the 29th onwards blew most of the locusts out to sea.

• **FORECAST**

*There is a low to moderate risk that immature adults, groups and perhaps a few swarms could appear in the Canary Islands from Northwest Africa during periods of warm southerly winds. This risk should decline in January.*

**Portugal**

• **SITUATION**

Between 30 November and 1 December, immature swarms reached the southwestern tip of the country on the Algarve coast between Sagres (3700N/0856W) and Vila do Bispo (3705N/0855W). Heavy rain and strong winds quickly blew them out to sea.

• **FORECAST**

*There is a low risk that immature adults, groups*



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*and perhaps a few swarms could appear in the Algarve from Northwest Africa during periods of warm southerly winds. This risk will decline in January.*

### **CENTRAL REGION**

#### **Sudan**

##### • SITUATION

During November, no locusts were seen in winter breeding areas on the Red Sea coast from Tokar Delta to Oseif. Isolated mature adults were still present in a few places in the summer breeding areas in Northern Kordofan northeast of Sodiri (1423N/2906E).

##### • FORECAST

*There is a moderate risk that immature adults, groups and perhaps a few swarms could appear from the north on the coastal plains between the Egyptian and Eritrean borders. If conditions are favourable, the adults will mature and lay eggs that could hatch in January and hoppers may form small groups or bands.*

#### **Eritrea**

##### • SITUATION

The situation was reported as calm up to 17 November.

##### • FORECAST

*Isolated adults may appear on the northern coastal plains of the Red Sea and breed on a small scale if rainfall occurs.*

#### **Somalia**

##### • SITUATION

No reports received.

##### • FORECAST

*No significant developments are likely.*

#### **Ethiopia**

##### • SITUATION

No locusts were seen during surveys between Dire Dawa and northern Somalia in November.

##### • FORECAST

*No significant developments are likely.*

#### **Djibouti**

##### • SITUATION

No locusts were seen during a survey on the coastal plains between Djibouti and the northern Somali border on 26 November.

##### • FORECAST

*No significant developments are likely.*

#### **Egypt**

##### • SITUATION

During the first half of November, about a dozen immature swarms moved east along the Mediterranean coast and reached several farms in the Nile Delta and between Cairo and Alexandria. A swarm was first reported in the Western Desert near Bahariya (2821N/2851E) on the 1st.

During the second half of the month, swarms continued to move east along the northern coast, reaching the northern Sinai Peninsula at El Arish (3108N/3348E) on the 17th, Ismailia (3036N/3215E) on the 18th, and Port Said (3117N/3218E) on the 20th. A large swarm flew over Cairo on the 17th and arrived along the Gulf of Suez by the end of the day. From the 20th onwards, several groups and swarms moved about in the Sinai Peninsula, generally in a southerly direction towards the northern Red Sea. A swarm was reported in the southern Sinai at Sharm Esh Sheikh (2752N/3413E) and scattered immature gregarious adults were seen in many of the resorts along the Red Sea coast between Hurghada (2717N/3347E) and Marsa Alam (2504N/3454E). A small swarm was seen in the Red Sea Hills west of Marsa Alam at El Baramia (2504N/3338E) on the 24th. By the end of the month, locusts were reported on the coast at Berenice (2359N/3524E). In the Western Desert, a few swarms were seen near Abu Minkar (2633N/2742E) on the 20th and Farafra (2710N/2818E) on the 22nd. In the southwest, isolated solitary adults were seen in Gilf Kebir and scattered gregarious immature adults were seen between Jebel Uweinat (ca. 2201N/2513E) and Dakhla (2530N/2900E) during the last week. Ground control operations treated an estimated 50,000 ha between 28 October and 25 November.

##### • Forecast

*The locusts in the northeast and in the Sinai Peninsula are expected to disperse and drift further south along the Red Sea coastal plains. Low to moderate numbers of immature adults are likely to reach the winter breeding areas between Shalaty and Halaib. If rainfall occurs, adults will mature and lay eggs. Consequently, hatching could start by the end of the forecast period and hoppers may form small groups or bands.*

#### **Saudi Arabia**

##### • SITUATION

On 21 November, scattered immature gregarious adults and groups appeared on the Gulf of Aqaba coast south of the Jordanian border and on the northern Red Sea coastal plains near Duba (2719N/3546E). Infestations at densities up to 1,000

adults/ha, including a swarm that dispersed in trees, continued to be reported until the end of the month in these areas. Scattered immature adults were also seen further south on the Red Sea coast near Umm Lajj (2501N/3716E). Control operations treated 1,100 ha during November.

• **FORECAST**

*Locusts that escape detection and control on the northern Red Sea coastal plains are likely to disperse along the coastal plains between Duba and Jeddah where they will eventually mature and lay eggs in areas that receive rainfall. Consequently, hatching could start by the end of the forecast period and hoppers may form small groups or bands.*

**Yemen**

• **SITUATION**

No reports received.

• **FORECAST**

*Scattered adults are likely to be present on the Red Sea coastal plains and breed on a small scale in areas of recent rainfall. Consequently, locust numbers are expected to increase but remain below threatening levels.*

**Oman**

• **SITUATION**

No reports received.

• **FORECAST**

*No significant developments are likely.*

**Lebanon**

On 31 October, small groups of immature adults, at densities of 5-6 adults/m<sup>2</sup>, arrived on the coast between Sidon (3333N/3522E) and Al Batrun (3415N/3539E), probably on strong southwesterly winds from northeast Egypt. Most of the infestations were north of Beirut near Jbail (3401N/3540E). Control operations treated 10 ha. A few scattered adults were seen in coastal areas up to 8 November.

**FORECAST**

*No significant developments are likely.*

**Israel**

On 3 November, scattered immature adults and small groups reached the coastal plains between Ashkelon (3139N/3432E) and Haifa (3248N/3459E), probably on strong southwesterly winds from northeast Egypt. On the 19-21st, several immature swarms arrived in the Negev Desert in the south from adjacent areas in the Sinai Peninsula. Swarms were reported in Eilat (2933N/3457E) and in several agricultural areas in the Arava Valley near the Jordanian border. Ground and aerial control operations were immediately undertaken. On the 21st, a few adults were seen further north near Jerusalem

and, on the 25th, in the Dead Sea area near Ein Gedi (3127N/3523E) as well as in the Golan Heights. On the 26th, two swarms were again seen in the Arava valley near the Jordanian border and control operations were undertaken.

**FORECAST**

*A few immature groups and small swarms may still appear in the south coming from the west during periods of warm southwesterly winds. Some locusts may move back and forth along the border with Jordan. Most of the locusts are likely to continue south towards the Red Sea but a few may persist and eventually mature.*

**Jordan**

On 19 November, small groups of immature adults at low densities were seen on trees near Aqaba (2937N/3500E). On the 21st, numerous larger groups arrived from adjacent areas of Israel in the Arava Valley between Aqaba and Ghor Safi (3023N/3510E). Ground control operations treated 4,520 ha on 20-24 November.

**FORECAST**

*A few immature groups and small swarms may still appear near Aqaba coming from the west during periods of warm southwesterly winds. Some locusts may move back and forth along the border with Israel. Most of the locusts are likely to continue south towards the Red Sea but a few may persist and eventually mature.*

**Palestine**

On 25 November, an immature swarm arrived in the southern Gaza near Mwassi. A small swarm was reported on the West Bank near Jerusalem at Abu Dis.

**FORECAST**

*A few immature groups and small swarms may still appear in Gaza and the West Bank coming from the west during periods of warm southwesterly winds. Some locusts may move back and forth along the border with Israel. Most of the locusts are likely to continue south towards the Red Sea but a few may persist and eventually mature.*

**Syria**

On 22-23 November, individual locust adults, mostly dead, reached coastal areas between Latakia (3531N/3547E) and Tartous (3453N/3555E), probably



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on strong southwesterly winds from northeast Egypt.

### FORECAST

*No significant developments are likely.*

**Bahrain, Iraq, Kenya, Kuwait, Qatar, Tanzania, Turkey, UAE and Uganda**

### • FORECAST

*No significant developments are likely.*

### MEDITERRANEAN

#### Cyprus

On 30 October, an immature swarm arrived in the west in Paphos district (ca. 3446N/3225E) and subsequently moved inland where a swarm was reported on the Akamas Peninsula on 2 November. The swarm is thought to have split up and dispersed. Limited control operations were undertaken.

### FORECAST

*There is a low risk that locusts could appear during periods of warm and strong southerly winds in December; thereafter, this risk will diminish.*

### EASTERN REGION

#### Iran

### • SITUATION

No locusts were seen along the southern and southeastern coastal plains during November.

### • FORECAST

*No significant developments are likely.*

#### Pakistan

### • SITUATION

During the second half of October, a few isolated adults were present in the summer breeding areas near the Indian border. No locusts were reported and first half of November.

### • FORECAST

*No significant developments are likely.*

#### India

### • SITUATION

No locusts were seen during the second half of October and first half of November.

### • FORECAST

*No significant developments are likely.*

#### Afghanistan

### • SITUATION

No reports received.

### • FORECAST

*No significant developments are likely.*



## Announcements

**Locust reporting.** Affected countries are kindly reminded to make sure that all locust situation reports are sent to FAO HQ by the 28th day of the month so the information can be included in the FAO bulletin for the current month; otherwise, it will not appear until the following month. Reports should be sent even if no locusts were found or if no surveys were conducted.

**During emergencies, RAMSES data should be transmitted twice/week and situation summaries should be sent every ten days.**

**Reporting by e-mail.** After each survey or control operation, affected countries should send completed FAO Desert Locust Survey and Control Forms or the RAMSES output file with a brief interpretation of the results by e-mail to [eclo@fao.org](mailto:eclo@fao.org).

**Locust archives.** Desert Locust reports received by FAO from affected countries from 1952 to the present are available on a series of four CDs in PDF. Please contact the Locust Group for more details.

**Upsurge photos.** Pictures of the current upsurge in the Western Region are available on the Internet at: [www.fao.org/news/global/locusts/outbreakpix04.htm](http://www.fao.org/news/global/locusts/outbreakpix04.htm)

**Desert Locust booklet.** FAO has produced a booklet for the general public and donor community entitled *Hunger in their wake: Inside the battle against the Desert Locust*, available for download at: [www.fao.org/news/global/locusts/pubs1.htm](http://www.fao.org/news/global/locusts/pubs1.htm)

**Publications on the Internet.** New FAO publications and meeting reports are available for downloading at [www.fao.org/news/global/locusts/pubslst.htm](http://www.fao.org/news/global/locusts/pubslst.htm):

- Guidelines on minimum requirements for ground-based locust and grasshopper sprayers (English)
- Contingency planning spreadsheets and simulations for outbreaks, upsurges and plagues (English, French)
- 8th Desert Locust Control Committee Technical Group meeting report (English, French)
- FAO Desert Locust Standard Operating Procedures (SOP) for survey, control and aerial operations (English, Arabic)
- FAO Desert Locust Guidelines – Arabic version



**Assistance provided.** Details of assistance provided by donors to the current locust campaign are available on the Internet at: [www.fao.org/news/global/locusts/donor/donor.htm](http://www.fao.org/news/global/locusts/donor/donor.htm).

**2005 events.** The following meetings are scheduled:

- **SW Asia Commission.** 24th session, Delhi (India), 10-14 January
- **EMPRES/WR.** 3rd Liaison Officers meeting, Dakar (Senegal), 5-12 February (provisional)

**Press release.** Several press releases on the current Desert Locust emergency have been recently issued by FAO. These are available at: <http://www.fao.org/newsroom/en/index.html>.



## Glossary of terms

The following special terms are used in the Desert Locust Bulletin when reporting locusts:

### **NON-GREGARIOUS ADULTS AND HOPPERS**

#### ISOLATED (FEW)

- very few present and no mutual reaction occurring;
- 0 - 1 adult/400 m foot transect (or less than 25/ha).

#### SCATTERED (SOME, LOW NUMBERS)

- enough present for mutual reaction to be possible but no ground or basking groups seen;
- 1 - 20 adults/400 m foot transect (or 25 - 500/ha).

#### GROUP

- forming ground or basking groups;
- 20+ adults/400 m foot transect (or 500+/ha).

### **ADULT SWARM AND HOPPER BAND SIZES**

#### VERY SMALL

- swarm: less than 1 km<sup>2</sup>      • band: 1 - 25 m<sup>2</sup>

#### SMALL

- swarm: 1 - 10 km<sup>2</sup>      • band: 25 - 2,500 m<sup>2</sup>

#### MEDIUM

- swarm: 10 - 100 km<sup>2</sup>      • band: 2,500 m<sup>2</sup> - 10 ha

#### LARGE

- swarm: 100 - 500 km<sup>2</sup>      • band: 10 - 50 ha

#### VERY LARGE

- swarm: 500+ km<sup>2</sup>      • band: 50+ ha

### **RAINFALL**

#### LIGHT

- 1 - 20 mm of rainfall.

#### MODERATE

- 21 - 50 mm of rainfall.

#### HEAVY

- more than 50 mm of rainfall.

### **OTHER REPORTING TERMS**

#### BREEDING

- the process of reproduction from copulation to fledging.

#### SUMMER RAINS AND BREEDING

- July - September/October

#### WINTER RAINS AND BREEDING

- October - January/February

#### SPRING RAINS AND BREEDING

- February - June/July

#### DECLINE

- a period characterised by breeding failure and/or successful control leading to the dissociation of swarming populations and the onset of recessions; can be regional or major.

#### OUTBREAK

- a marked increase in locust numbers due to concentration, multiplication and gregarisation which, unless checked, can lead to the formation of hopper bands and swarms.

#### UPSURGE

- a period following a recession marked initially by a very large increase in locust numbers and contemporaneous outbreaks followed by the production of two or more successive seasons of transient-to- gregarious breeding in complimentary seasonal breeding areas in the same or neighbouring Desert Locust regions.

#### PLAGUE

- a period of one or more years of widespread and heavy infestations, the majority of which occur as bands or swarms. A major plague exists when two or more regions are affected simultaneously.

#### RECESSION

- period without widespread and heavy infestations by swarms.

#### REMISSION

- period of deep recession marked by the complete absence of gregarious populations.

### **REGIONS**

#### WESTERN

- locust-affected countries in West and North-West Africa: Algeria, Chad, Libya, Mali, Mauritania, Morocco, Senegal, Tunisia; during plagues only: Burkino Faso, Cape Verde, Gambia, Guinea Bissau and Guinea Conakry.



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### **CENTRAL**

- locust-affected countries along the Red Sea: Djibouti, Egypt, Eritrea, Ethiopia, Oman, Saudi Arabia, Somalia, Sudan, Yemen; during plagues only: Bahrain, Iraq, Israel, Jordan, Kenya, Kuwait, Qatar, Syria, Tanzania, Turkey, UAE and Uganda.

### **EASTERN**

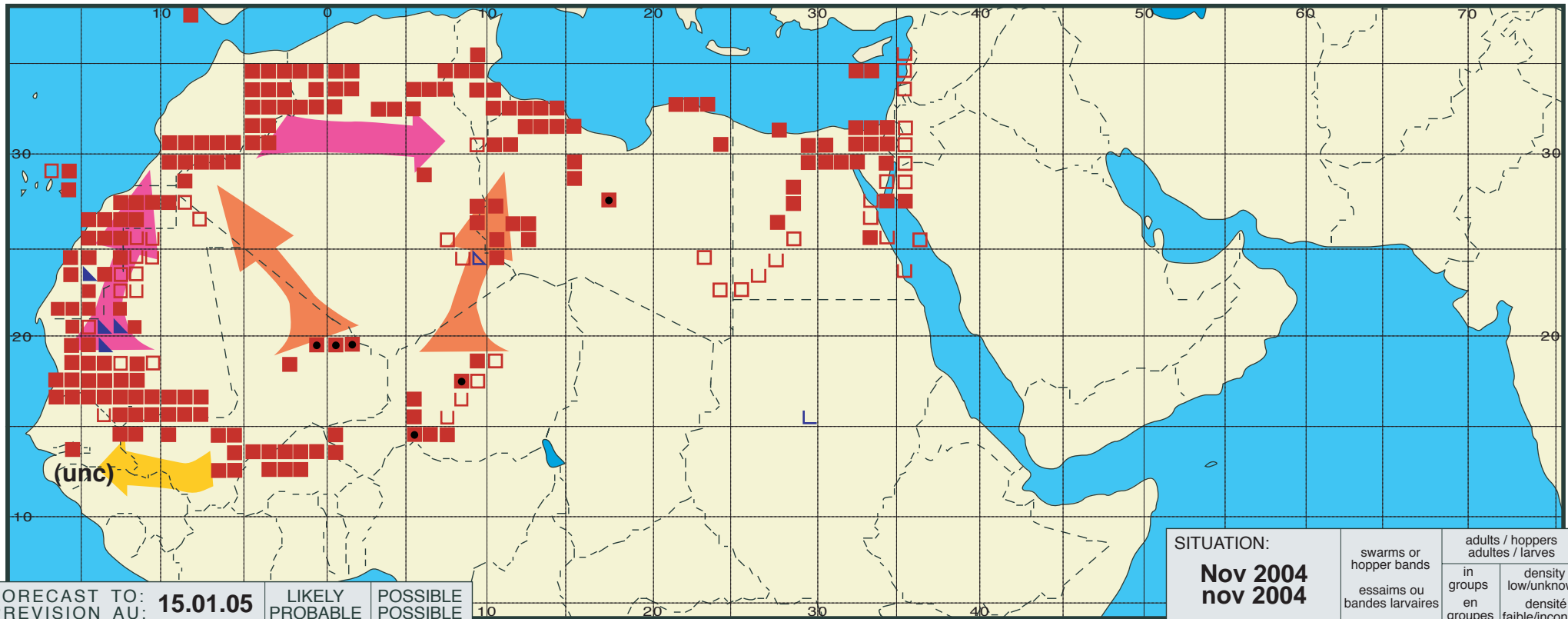
- locust-affected countries in South-West Asia: Afghanistan, India, Iran and Pakistan.



# Desert Locust Summary

## Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU: <b>15.01.05</b>	LIKELY PROBABLE	POSSIBLE POSSIBLE
favourable breeding conditions conditions favorables à la reproduction		
major swarm(s) essaim(s) important(s)		
minor swarm(s) essaim(s) limité(s)		
non swarming adults adultes non essaimant		

SITUATION: <b>Nov 2004 nov 2004</b>	swarms or hopper bands	adults / hoppers adultes / larves	
	essaims ou bandes larvaires	in groups en groupes	density low/unknown densité faible/inconnue
immature adults adultes immatures			
mature or partly mature adults adultes matures ou partiellement matures			
adults, maturity unknown adultes, maturité inconnue			
egg laying or eggs pontes ou œufs			
hoppers larves			
hoppers & adults (combined symbol example) larves et adultes (exemple symboles combinés)			

immature adults adultes immatures			
mature or partly mature adults adultes matures ou partiellement matures			
adults, maturity unknown adultes, maturité inconnue			
egg laying or eggs pontes ou œufs			
hoppers larves			
hoppers & adults (combined symbol example) larves et adultes (exemple symboles combinés)			